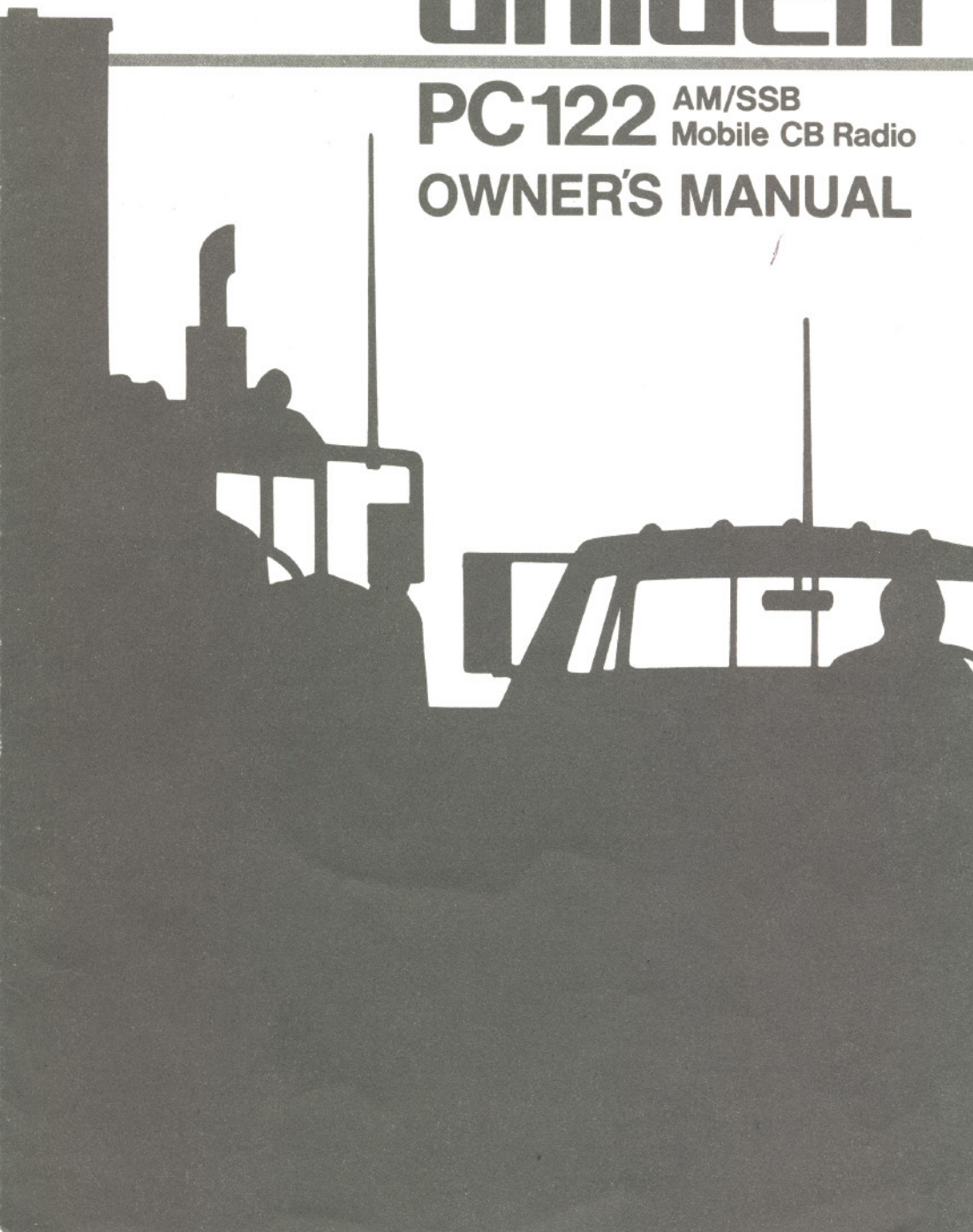


# uniden®

**PC122** AM/SSB  
Mobile CB Radio

**OWNER'S MANUAL**



## WELCOME

To the world of sophisticated, microprocessor controlled AM/SSB radio communications. Your Uniden PC 122 represents the most advanced mobile type radio ever designed for use in the Citizens Band Radio Service. It will operate on any of the 40 AM frequencies and Upper and Lower Side Band Frequencies designated by the Department of Communications. Your PC 122 features a frequency synthesizing circuit with PHASE LOCK LOOP techniques to assure precise frequency control. This radio has been type accepted and certified by the D.O.C.

### WARNING

Before transmitting with your transceiver, you must obtain a Department of Communications (D.O.C.) Citizens Radio Licence. Obtain an application form, from the D.O.C. Before completing the form you should read the conditions governing the licensing and operation of the C.R.S. (D.O.C. brochure RB 249). This brochure also can be obtained from the D.O.C. After completing the application form, mail it with the appropriate fee to the Superintendent Regulatory of Licensing in the State or territory in which the station will be operated.

## MOBILE INSTALLATION

Plan the location of the radio and microphone bracket before starting installation. Select a location that is convenient for operation and does not interfere with the driver or passenger in the vehicle. The radio should be securely fastened to a solid surface using the mounting bracket and self-tapping screws which are provided.

## MOBILE ANTENNA

Since the maximum allowable power output of the transceiver is limited by the D.O.C., the antenna is a very important factor affecting transmission distance. It is for this reason that we strongly recommend that you install only a quality antenna in your new CB radio system. You have purchased a superior quality transceiver. Don't diminish its performance by installing an inferior antenna.

Only a properly matched antenna system will allow maximum power transfer from the 50-ohm transmission line to the radiating element. We recommend that you use an SWR meter when installing your antenna. Set your PC 122 to channel 20 and adjust to SWR - 1. Your SANTRONIC dealer is qualified to assist you in the selection of the proper antenna to meet your application requirements.

For automobile installation, the whip antenna may be used with good effect. The most efficient and practical installation is a full quarter wave whip antenna mounted on the rear deck or fender top, midway between the rear window and bumper.

A short "loaded" whip antenna is more convenient to install on your automobile, although the efficiency is less than a full quarter wave whip antenna.

For marine installation, consult your dealer for information regarding an adequate grounding system and prevention of electrolysis between fittings on the hull and water.

## **CONNECTING THE POWER CORDS**

With regard to the connection of the power cords, it may be possible or desirable to connect the red lead (for negative ground systems) or the black lead (for positive ground systems) to the ignition switch accessory terminal so that the radio is automatically turned off when the ignition switch (key) is turned off.

Alternately, the power lead may be connected to an available terminal on the fuse block or even to a point in the wiring harness. Care must be taken, however, to guard against a short circuit condition. When in doubt, please contact your vehicle dealer for specific information for your vehicle.

## **GROUND INFORMATION**

A negative ground system is generally identified by the " - " battery terminal being connected to the vehicle motor block, but if you cannot determine the polarity of your vehicle, consult your vehicle dealer for information.

**NOTE:** This radio may be installed and used in any 12-volt DC negative or positive ground system.

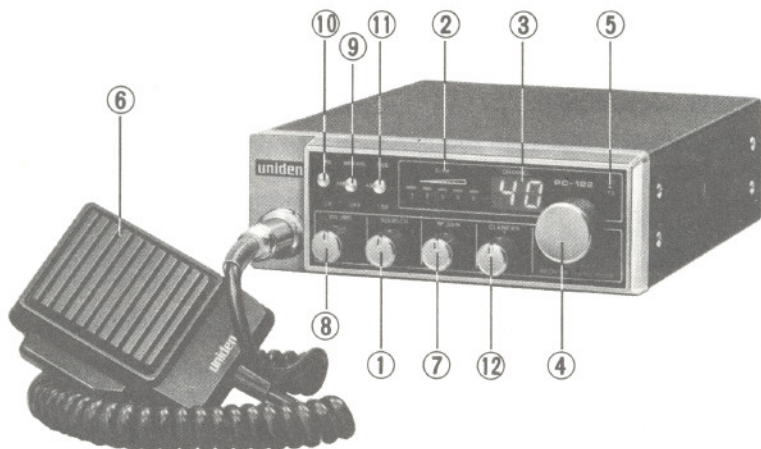
## **NEGATIVE GROUND SYSTEM**

If you are operating on a negative ground system, connect the red DC power cord from the radio to the positive "+" battery terminal or other convenient point and connect the black power lead to the chassis or vehicle frame, or the negative " - " terminal of the battery.

## **POSITIVE GROUND SYSTEM**

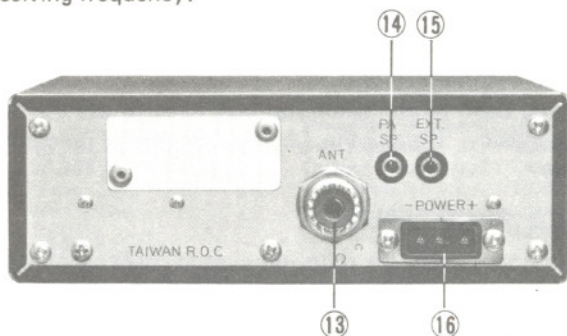
If you are operating on a positive ground system, connect the black DC power cord from the radio to the negative " - " battery terminal or other convenient point and connect the red power lead to the chassis or vehicle frame, or the positive "+" terminal of the battery.

## CONTROLS AND FUNCTIONS



- 1. SQUELCH** — The squelch control is used to eliminate background noise during the absence of a transmission. Turn the control fully counterclockwise, then slowly rotate it back clockwise until all noise disappears. At this setting any transmission must be slightly stronger than the background noise to “Break Squelch” or to be heard. Further clockwise rotation will increase the threshold at which a signal will be heard. You can select any level to “Break Squelch”.
- 2. S/R/F METER** — This LED meter shows the relative strength of the received signal or transmit power.
- 3. CHANNEL INDICATOR** — Displays the channel currently in use.
- 4. CHANNEL SELECTOR** — This switch selects the desired channel for transmission and reception. All channels, except channel 9, may be used for communications between stations operating under different license. Channel 9 has been reserved by the D.O.C. for emergency communications involving the immediate safety of individuals or the immediate protection of property. Channel 9 also may be used to render assistance to a motorist. This is the D.O.C. rule and applies to all operators of CB radios.
- 5. TX INDICATOR** — An LED lights to indicate when the radio is transmitting.
- 6. MICROPHONE** — The operational mode of the CB is controlled by the push-to-talk switch on the microphone. Press the switch to activate the transmitter and disable the receiver. Release the switch to enable the receiver and disable the transmitter. When transmitting, hold the microphone about 2 inches from your mouth and speak clearly in a normal voice. The microphone included with the PC 122 is a detachable, low impedance, dynamic type.
- 7. RF GAIN** — This control is used to adjust signal reception in areas where strong signals are present. Turn the control fully clockwise for maximum reception.
- 8. VOLUME CONTROL** — Rotate clockwise to turn radio on and to increase volume.

9. **NB/ANL SWITCH** – You can select either Noise Blanker and Automatic Noise Limiter, only Automatic Noise limiter or all filters OFF. The NB and ANL help to reduce harsh background noise caused by a variety of interference sources. The ANL will not work in the USB or LSB mode.
10. **PA SWITCH** – Move this switch to the Public Address mode when an external PA speaker is connected. When the PA mode is selected, you can use the PA function and yet can monitor CB incoming signals. Adjust the PA output level by rotating the volume control.
11. **AM/SSB SELECTOR** – The three position switch allows you to select AM (standard 40 channel CB) or USB (Upper Side Band) or LSB (Lower Side Band) operation.
12. **CLARIFIER** – Turn this control to achieve the best tuning of the upper or lower side band receiving frequency.



13. **ANTENNA CONNECTOR** – This female connector permits connection of the transmission line cable male connector (PL-259) to the transceiver.
14. **PUBLIC ADDRESS** – An external 8 ohm 4-watt speaker must be connected to the "PA SP" jack located on the back of the unit. The speaker must be directed away from the microphone to prevent feedback.
15. **EXTERNAL SPEAKER** – The external speaker jack is used for remote receiver monitoring. The external speaker should have an 8 ohm impedance and be rated at least 4 watts. When an external speaker is connected, the internal speaker is disabled.
16. **POWER** – This plug permits connection of the DC power to the transceiver. The supplied DC Cord's plug is polarized which ensures that power will always be connected and fused properly.

## OPERATING PROCEDURE TO RECEIVE

1. Be sure that the power source, antenna and microphone are properly connected.
2. Turn the unit on by rotating the Volume control clockwise.
3. Set the channel selector switch to the desired channel.
4. Set the Volume control to a comfortable listening level.
5. Listen to the background noise from the speaker. Turn the Squelch control clockwise until the noise disappears (no signal should be present). Leave the control at

this setting. The squelch is now properly set. The receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some weaker signals will not be heard.

## OPERATING PROCEDURE TO TRANSMIT

1. Select the desired channel for transmission.
2. If the channel is clear, depress the push-to-talk switch on the side of the microphone and speak in a normal voice.

**CAUTION:** The transceiver Voltage Standing Wave Ratio (V.S.W.R.) measurement must be performed prior to the use of the transmitter. A "V.S.W.R." ratio in excess of 2:1 may damage the transmitter.

## OPERATION OF SSB

Choose the desired side band frequency by, A; select standard channel (1 – 40), B; select Upper or Lower side band by moving AM/SSB switch. Transmit or receive according to previous instructions.

When receiving a side band transmission you may need to use the Clarifier control to fine tune that frequency. Rotate the Clarifier clockwise or counterclockwise for optimum reception.

## PREVENTATIVE MAINTENANCE

At six to twelve month intervals, the following system checks should be made:

1. Check the Standing Wave Ratio (V.S.W.R.)
2. Inspect all electrical connections.
3. Inspect antenna coaxial cable for wear.
4. Inspect all screws and other mounting hardware.

## TROUBLE SHOOTING

If your PC 122 is not performing up to your expectations, please try these simple steps. If you still cannot get satisfactory results after reading this manual and following the trouble shooting steps, you may need to have your unit serviced.

trouble	check
Unit will not turn on. No power	<ol style="list-style-type: none"><li>1. Check power cord and all connections.</li><li>2. Check power cord fuse.</li><li>3. Check vehicle electrical system.</li></ol>
Poor reception	<ol style="list-style-type: none"><li>1. Check and adjust Squelch.</li><li>2. Check antenna system and cable, connectors.</li><li>3. Check operation mode of the radio.</li></ol>
Weak transmission	<ol style="list-style-type: none"><li>1. Check antenna system and cable, connectors.</li><li>2. Check antenna grounding.</li><li>3. Check for corrosion on connectors.</li></ol>

If you determine that service is necessary, contact your local dealer or pack the unit in its original carton. Send it along with a brief, concise description of the problem, your name, address, phone number, and a copy of the original purchase receipt to the address listed in the warranty.

## SERVICING YOUR CB

Technical information, diagrams and charts will be provided upon request. It is the user's responsibility to see that this radio is operating at all times in accordance with the D.O.C. Citizens Radio Service regulations. We highly recommend that you consult a qualified radiotelephone technician for service and alignment of this radio. When ordering parts, it is important to specify the correct model number and serial number of this radio.

Please refer to the WARNING information on the first page of this manual.

## SPECIFICATIONS

### GENERAL

Channels : 40 AM, 40 USB, 40 LSB  
Frequency Range : 26.965 to 27.405 MHz  
Frequency Control : Phase Lock Loop (PLL) synthesizer  
Frequency Tolerance: 0.005%  
Operating Temp. : -30°C to +50°C  
Microphone : Plug in type; dynamic  
Input Voltage : 13.8 VDC nom. (+ or - ground)  
Current Drain : TX: AM full mod., 2.2 A, SSB 12 watts PEP output, 2 A  
RX: AM & SSB with max audio output 0.6 A  
Size : 6" W x 7½" D x 2" H  
Weight : 2 lb. 10 oz.  
Antenna Connector : UHF, SO-239  
Semiconductors : 41 transistors, 7 IC, 49 diodes  
LED Meter : Indicates relative power output and receive signal strength

### TRANSMITTER

Power Output : AM 4 watts, SSB 12 watts P.E.P.  
Modulation : Class B amplitude modulation  
Intermodulation Distortion : SSB: 3rd and 5th order, better than - 25dB, 7th and 9th order better than - 35dB  
SSB Carrier Suppression : Better than - 55dB

Unwanted Sideband : Better than - 50dB  
Freq. Response : 300 - 3000 Hz  
Output Impedance : 50 ohms, unbalanced  
SSB Filter : 10.695 MHz, 8 pole monolithic type 6dB @ 4.2KHz, 60dB @ 7.0KHz

### RECEIVER

Sensitivity : SSB: Better than .25  $\mu$ V for 10dB; (S + N)/N @ greater than 1/2 watt of audio output, AM; Better than .5  $\mu$ V for 10 dB; (S + N)/N @ greater than 1/2 watt of audio output  
Selectivity : SSB and AM; 6dB @ 4.2 KHz, 60dB @ 7.0KHz  
Cross Modulation : More than 50dB  
Image Rejection : More than 75dB  
I.F. Frequency : AM and SSB; 10.695 MHz  
Automatic Gain Control : (AGC): less than 10dB change in audio output for inputs from 10 to 500,000 microvolts  
Squelch : Adjustable; threshold less than .5  $\mu$ V  
Clarifier :  $\pm$ 1.5KHz  
Audio Output Power: 3 watts into 8 ohms  
Freq. Response : 350 to 2500 Hz  
Distortion : Less than 10% at 3 watts output  
Internal Speaker : 16 ohms, round  
External Speaker : (not supplied) 8 ohms  
PA System : 3 watts in external 8 ohm speaker

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## 12 MONTHS FULL WARRANTY

**WARRANTOR.** SANTRONIC AGENCIES PTY. LTD. 13 Garema Circuit, Kingsgrove NSW 2208 ("SANTRONIC").

**ELEMENTS OF WARRANTY.** SANTRONIC warrants, for the duration of this warranty, its UNIDEN CB Product to be free from defects in materials and craftsmanship with only the limitation or exclusions set out below.

**WARRANTY DURATION.** This Warranty shall terminate and be of no further effect One (1) year after the date of original purchase of the Product or at the time the Product is (a) damaged or not maintained as reasonable and necessary, (b) modified, (c) improperly installed, (d) is repaired by someone other than Warrantor for a defect or malfunction covered by this Warranty, or (e) used in a manner or purpose for which the Product was not intended.

**PARTS COVERED.** This Warranty covers all components of the Products.

**STATEMENT OF REMEDY.** In the event that the Product does not conform to this Warranty at any time while this Warranty is effective, Warrantor will repair the defect and return it to you prepaid, without charge for parts, service, or any other costs incurred by Warrantor or its representatives in connection with the performance of this Warranty. In addition, if the Product contains a defect or malfunction which is not repaired after a reasonable number of attempts by Warrantor to repair the Product, the Product or defective component will, at our discretion, be replaced without charge, when the defective product is delivered to the warrantor at 13 Garema Circuit Kingsgrove NSW 2208 free and clear of all liens and encumbrances. Please note that while the Product will be remedied under this Warranty without charge, THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow this exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY.** In the event that the Product does not conform to this Warranty, the Product should be shipped prepaid to Warrantor at 13 Garema Circuits Kingsgrove NSW 2208. THE ORIGINAL OR COPY OF THE SALES RECEIPT OR OTHER VALID EVIDENCE OF THE DATE OF THE ORIGINAL PURCHASE MUST ACCOMPANY THIS PRODUCT.

**LEGAL REMEDIES.** This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

# Santronic

AGENCIES PTY. LTD.

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PHONE 758 1522, TELEX AA73170  
P.O. Box 12, Kingsgrove, NSW 2208

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